

We claim:

1. A method comprising:

at a router:

- identifying at least one active communication link to provide an identified
- 5 active communication link;
- automatically identifying whether the router needs a new address prefix for the identified active communication link.

2. The method of claim 1 wherein identifying at least one active

10 communication link includes identifying a plurality of active communication links to provide a plurality of identified active communication links.

3. The method of claim 2 wherein automatically identifying whether the router needs a new address prefix includes identifying whether the router needs a

15 new address prefix for each of the plurality of identified active communication links.

4. The method of claim 1 wherein automatically identifying whether the router needs a new address prefix for the identified active communication link

20 includes automatically determining whether the router needs to advertise a new address prefix for use by link endpoints.

5. The method of claim 1 wherein automatically determining whether the router needs a new address prefix includes automatically determining when

25 the router has not received a prefix advertisement from another router for the same active communication link.

6. The method of claim 5 wherein automatically determining when the router has not received a prefix advertisement from another router for the same

30 active communication link includes automatically determining when the router has not received a prefix advertisement from another router for the same active communication link within a predetermined period of time.

7. The method of claim 4 wherein automatically determining whether the router needs to advertise a new address prefix for use by link endpoints includes automatically determining whether the router needs to advertise an address prefix for use by link endpoints by soliciting at least one router to advertise.

8. A method to automatically support automatic configuration of a network router comprising:
at the network router:

- automatically assessing each router link to identify active communication links to provide identified active communication links;
- for each identified active communication link:
 - automatically identifying whether the router needs to support the identified active communication link;
 - for each identified active communication link that is identified as needing support, automatically identifying whether that identified active communication link requires at least one network address prefix.

9. The method of claim 8 wherein automatically identifying whether the router needs to support the identified active communication link includes automatically monitoring the identified active communication link for prefix advertisements from another router that is supporting communications for the identified active communication link.

10. The method of claim 9 wherein automatically identifying whether the router needs to support the identified active communication link includes automatically determining that the router needs to support the identified active communication link when no other router has transmitted a prefix advertisement for the monitored identified active communication link.

11. A router comprising:

- first means for automatically identifying at least one active communication link to provide an identified active communication link; and

- second means for automatically identifying when the router needs to provide a new address prefix for the identified active communication link.

12. The router of claim 11 wherein the first means is further for automatically
5 identifying a plurality of active communication links to provide a plurality of
identified active communication links.

13. The router of claim 11 wherein the second means is further for
automatically identifying when the router needs to provide a new address
10 prefix for each of the plurality of identified active communication links.

14. The router of claim 11 wherein the second means is further for
automatically determining when the router needs to advertise a new address
prefix for use by link endpoints.

15. The router of claim 11 wherein the second means is further for
automatically determining when the router needs to advertise a new address
prefix for use by at least one link endpoint by soliciting at least one other
router to advertise.